



Clarke, Modet & Co

ESPAÑA

Calle Goya 11  
28001 Madrid. SPAIN

Tel.: 34 91 806 56 00

Fax.: 34 91 806 56 09 / 10

e-mail: clarke@clarkemodet.com

10/501583

EUROPEAN PATENT OFFICE  
(International Preliminary

Examining Authority)

Erhardtstr. 27

D-80331 München

(Alemania)

0104 Rec'd PCT/PTO 14 JUL 2004

COPY

Madrid, 22 August 2003

By DHL

PCT - CHAPTER II - INTERNATIONAL PRELIMINARY EXAMINATION  
VERY URGENT - PLEASE, DELIVER IMMEDIATELY

Re: International application no. PCT/ES03/00009  
Applicant(s): BRAKE PLUS, S.L., *et al.*  
O/Ref.:PXWO00001/2003

Dear Sirs:

(1) Further to our Demand for International Preliminary Examination dated 8 August 2003, and as indicated in the letter enclosed with said Demand, we herewith enclose:

- ✓ the translation into English (of description, claims, abstract and drawings) of the international application (9+2=11 pages)
- ✓ CLAIMS AMENDMENTS EXPLANATION SHEET(S) a-c, (expressions crossed out are deleted, underlined expressions are added; within <\*\*\* - \*\*\*> we have inserted comments regarding certain amendments)
- ✓ Replacement sheets 8 and 9, comprising retyped claims including the specified amendments.

The replacement sheets 8 and 9 are filed herewith as an amendment under Art. 34 PCT; contrary to what was stated in Box No. IV of the Demand, the applicant wishes the International Preliminary Examination to start on the basis of these claims as amended under Art. 34 PCT.

(2) As can be understood from the description, it is convenient (for example, for allowing conclusions to be based on comparisons of intensities of the emitted light at different wavelengths detected by different detector assemblies), that the different detector assemblies be directed to the same point and that the emissions received by the detector assemblies correspond to the result of excitation by the same light



AGENTES DE PATENTES Y MARCAS

ESPAÑA. ARGENTINA. BRASIL. CHILE. COLOMBIA. MÉXICO. PERÚ. PORTUGAL. VENEZUELA  
Madrid. Alicante. Barcelona. Bilbao. Málaga. Murcia. Oviedo. Santiago de Compostela. Sevilla. Valencia. Vigo. Vitoria



EXCELENCE



Clarke, Modet & Co

2

source. By means of the invention, it is possible, for example, to detect the intensity of emitted light at a plurality of wavelengths using one detector assembly for each wavelength (using a suitable filter 5). As all the detector assemblies 3 are directed to the same point, the intensity of the light at the different wavelengths can be measured simultaneously, using simple detectors. Thus, comparison of the output from the different detector assemblies can provide information regarding characteristics of the excited substance from which the light is emitted.

Contrarily, for example, EP-A-1158459 seems to refer to two rather independent light source+detector assemblies, each comprising one light source and one detector.

Respectfully submitted,

Angel Dávila Baz

Enc.: as specified above + acknowledgement of receipt form

CLAIMS

1.- A system for recognizing documents, ~~being of the type of systems used for~~  
~~recognizing documents provided with a security mark, which security mark is defined~~  
by comprising a substance which is excitable when a light coming from at the  
5 corresponding light source is emitted on it, ~~characterized in that the system~~  
~~comprising~~es

a monochromatic light source for exciting the substance defined by a modulated  
frequency diode laser (1) ~~<\*\*\*the substitution of "defined by...laser (1)" by~~  
10 "monochromatic" is based on claim 7 as originally filed, which clearly states that the  
important issue is the monochromatic character of the light and not that a specific laser  
is used\*\*\*>; and

at least two detector assemblies (3) for detecting ~~the light emitted, by reflection~~  
~~or transmission, <\*\*\*these features have been transferred to dependent claims 12 and~~  
15 13, respectively\*\*\*> by the excitable substance of the security mark of the document to  
be recognized;

each detector assembly (3) being associated to a system for electronic  
processing defined by a filter (7) and an amplifier (8), ~~in turn connected to a single~~  
microprocessor;

each detector assembly (3) being integrated in a body (9) that groups together  
20 all the detector assemblies (3) for detecting the light emitted by the excitable substance  
of the security mark, said detector assemblies being directed towards a common  
point<\*\*\*supported by claim 4 as originally filed\*\*\*>.

2.- A system ~~for recognizing documents according to claim 1,~~  
~~wherein~~ characterized in that since the light source comprises ~~is defined by~~ a diode laser  
25 (1) of small dimensions and with focused light, so that all of the light output is at a  
narrow wavelength and at one point.

3.- A system ~~for recognizing documents according to claim 1 or 2,~~  
~~wherein~~ characterized in that each detector assembly (3) for detecting the light emitted,  
~~by reflection or transmission, from the excitable substance of the security mark, is~~  
30 defined by a photodiode (4), a filter (5) and a lens (6), duly encapsulated.

4.- A system ~~for recognizing documents according to claims 1 and 3,~~  
~~characterized in that each detector assembly (3) for detecting the light emitted, by~~  
~~reflection or transmission, from the excitable substance of the security mark, is~~  
integrated in a body (9) which groups all the detector assemblies (3) for detecting the  
35 light reflected, which detector assemblies are directed towards a common point.

4.- A system according to claim 3, wherein the filters (5) are selected so that different detector assemblies (3) detect the intensity of light corresponding to different wavelengths ( $\lambda_1$ - $\lambda_9$ )<\*\*\*supported by, for example, page 4, lines 15-19 of the English translation of the description as originally filed\*\*\*>.

5 5.- A system for recognizing documents according to any of the preceding claims 1, ~~wherein~~ characterized in that with the arrangement of the elements forming part of the system are arranged so thatfor recognizing, the detection path length is very short, wherebyobtaining a better optical tolerance with regard to the banknote pass distance, and ~~obtaining~~ a small-sized and low cost equipment, are obtained.

10 6.- A system for recognizing documents according to any of the preceding claims 1, ~~wherein~~ characterized in that the system for recognizing incorporates a presence detector determining the placement of the security mark on the document to be recognized.

15 7.- A system for recognizing documents according to any of the preceding claims 1, ~~wherein~~ characterized in that the light source is provided with ~~a~~can be defined by ~~any light source with its corresponding filter for~~, achieving the necessary monochromatic character.

8.- A system according to any of the preceding claims, wherein the light source comprises a diode laser<\*\*\*cf. claim 1 as originally filed\*\*\*>.

20 9.- A system according to claim 8, wherein the diode laser is a modulated frequency diode laser (1)<\*\*\*cf. claim 1 as originally filed\*\*\*>.

25 10.- A system according to any of the preceding claim, the system being arranged to analyze relative intensities of light emitted by the excitable substance at different wavelengths ( $\lambda_1$ - $\lambda_9$ ) detected by the respective detector assemblies (3), the wavelengths being determined by the respective filters (5) integrated in the respective detector assemblies<\*\*\*for support, cf. page 4, lines 13-19 of the English translation of the description as originally filed\*\*\*>.

30 11.- A system according to any of the preceding claims, the system being arranged to determine, with the definition of a threshold, the existence or non-existence of emission of light by the excitable substance, at different wavelengths ( $\lambda_1$ - $\lambda_9$ ) detected by the respective detector assemblies (3), the wavelengths being determined by the respective filters (5) integrated in the respective detector assemblies<\*\*\*for support, cf. page 4, lines 13-19 of the English translation of the description as originally filed\*\*\*>.

35 12.- A system for recognizing documents according to any of the preceding

claims, wherein the detector assemblies (3) are arranged for detecting light emitted, by reflection, by the excitable substance of the security mark <\*\*\*supported by claim 1 as originally filed\*\*\*>.

- 5 13.- A system for recognizing documents according to any of claims 1-11, wherein the detector assemblies (3) are arranged for detecting light emitted, by transmission, by the substance of the security mark <\*\*\*supported by claim 1 as originally filed\*\*\*>.

CLAIMS

1.- A system for recognizing documents provided with a security mark comprising a substance which is excitable when a light coming from a corresponding light source is emitted on it, the system comprising

5 a monochromatic light source for exciting the substance; and  
at least two detector assemblies (3) for detecting light emitted by the excitable substance of the security mark of the document to be recognized;

each detector assembly (3) being associated to a system for electronic processing defined by a filter (7) and an amplifier (8), connected to a single  
10 microprocessor;

each detector assembly (3) being integrated in a body (9) that groups together all the detector assemblies (3) for detecting the light emitted by the excitable substance of the security mark, said detector assemblies being directed towards a common point.

2.- A system according to claim 1, wherein the light source comprises a diode  
15 laser (1) of small dimensions and with focused light, so that all of the light output is at a narrow wavelength and at one point.

3.- A system according to claim 1 or 2, wherein each detector assembly (3) is defined by a photodiode (4), a filter (5) and a lens (6), duly encapsulated.

4.- A system according to claim 3, wherein the filters (5) are selected so that  
20 different detector assemblies (3) detect the intensity of light corresponding to different wavelengths ( $\lambda_1$ - $\lambda_9$ ).

5.- A system according to any of the preceding claims, wherein the elements forming part of the system are arranged so that the detection path length is very short, whereby a better optical tolerance with regard to the banknote pass distance, and a  
25 small-sized and low cost equipment, are obtained.

6.- A system according to any of the preceding claims, wherein the system incorporates a presence detector determining the placement of the security mark on the document to be recognized.

7.- A system according to any of the preceding claims, wherein the light source  
30 is provided with a filter for achieving the necessary monochromatic character.

8.- A system according to any of the preceding claims, wherein the light source comprises a diode laser.

9.- A system according to claim 8, wherein the diode laser is a modulated frequency diode laser (1).

35 10.- A system according to any of the preceding claim, the system being

arranged to analyze relative intensities of light emitted by the excitable substance at different wavelengths ( $\lambda_1$ - $\lambda_9$ ) detected by the respective detector assemblies (3), the wavelengths being determined by the respective filters (5) integrated in the respective detector assemblies.

5        11.- A system according to any of the preceding claims, the system being arranged to determine, with the definition of a threshold, the existence or non-existence of emission of light by the excitable substance, at different wavelengths ( $\lambda_1$ - $\lambda_9$ ) detected by the respective detector assemblies (3), the wavelengths being determined by the respective filters (5) integrated in the respective detector assemblies.

10        12.- A system for recognizing documents according to any of the preceding claims, wherein the detector assemblies (3) are arranged for detecting light emitted, by reflection, by the excitable substance of the security mark.

15        13.- A system for recognizing documents according to any of claims 1-11, wherein the detector assemblies (3) are arranged for detecting light emitted, by transmission, by the substance of the security mark.